



# Opportunities for R&D Partnerships

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- Small Business Innovation Research  
(SBIR)

- Small Business Technology Transfer  
(STTR)

7<sup>th</sup> Annual Small Business  
Conference  
Seattle, Washington  
June 28, 2006

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# **SBIR Program**

Small Business Innovation Development Act of 1982

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## **Congress established four major goals**

- Stimulate technological innovation
- Use small business to meet federal R&D needs
- Foster and encourage participation by minorities and disadvantaged persons in technological innovation
- Increase private-sector commercialization innovations derived from federal R&D



# **STTR Program**

## **Small Business Research and Development Enhancement Act of 1992**

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- Stimulate and foster scientific and technological innovation through cooperative research and development carried out between small business concerns and research institutions
- Foster technology transfer between small business concerns and research institutions



# Program Descriptions

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- Small Business Innovation Research (SBIR) – 2.5%
  - Set-aside program for small business concerns to engage in federal R&D – with potential for commercialization
  
- Small Business Technology Transfer (STTR) – 0.30%
  - Set-aside program to facilitate cooperative R&D between small business concerns and U.S. research institutions – with potential for commercialization

# SBIR / STTR Participating Agencies

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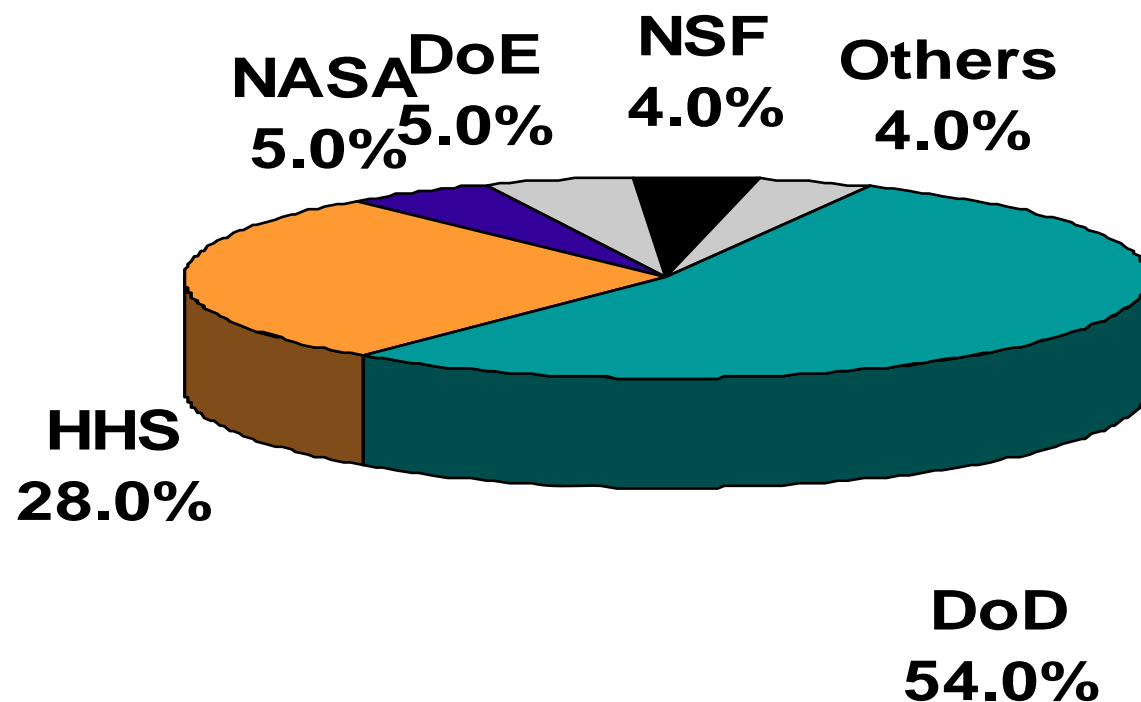
**TOTAL ~ \$2.3 + B**  
**FY 2006**

■ DOD	<b>SBIR/STTR</b>
■ HHS	<b>SBIR/STTR</b>
■ NASA	<b>SBIR/STTR</b>
■ DOE	<b>SBIR/STTR</b>
■ NSF	<b>SBIR/STTR</b>
■ DHS	<b>SBIR/STTR</b>
■ USDA	<b>SBIR</b>
■ DOC	<b>SBIR</b>
■ ED	<b>SBIR</b>
■ EPA	<b>SBIR</b>
■ DOT	<b>SBIR</b>

# SBIR Funding Allocation Across Federal Government

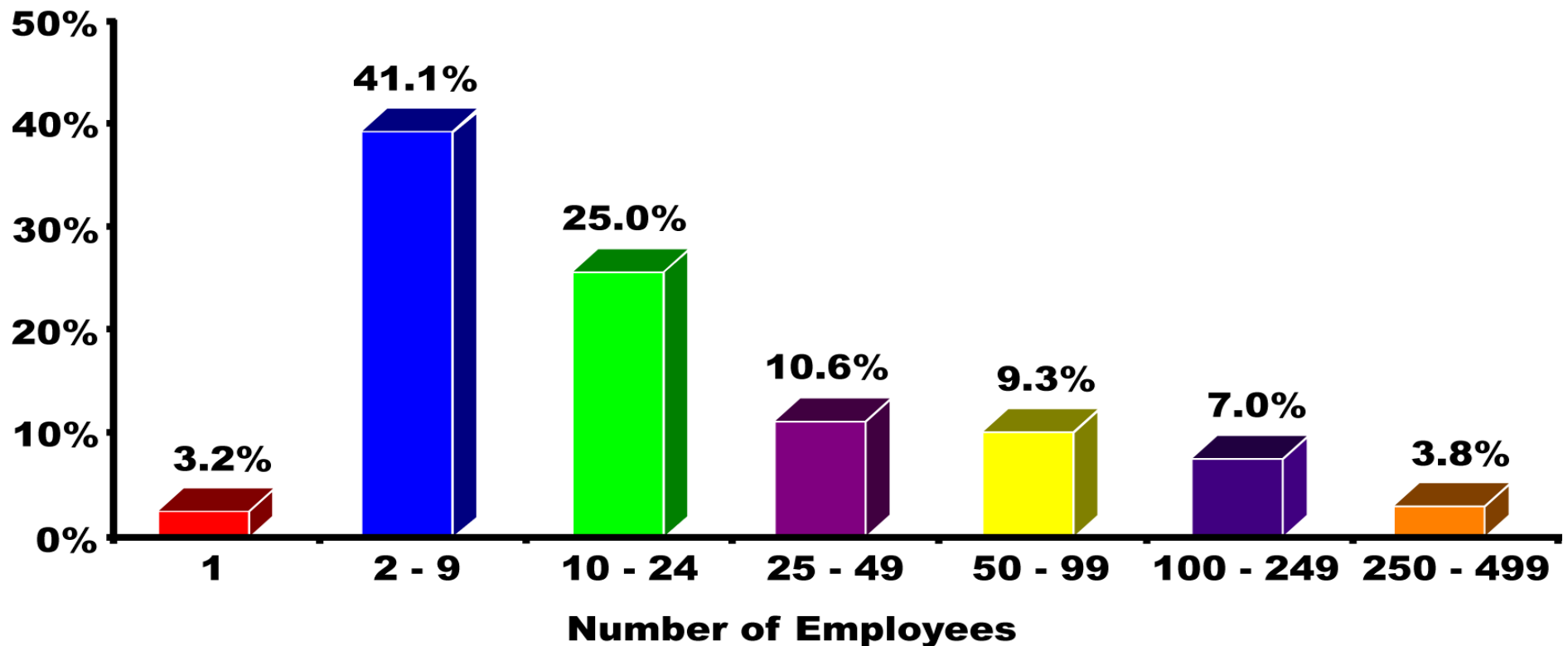
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## Estimate of SBIR Agency Funding (%)

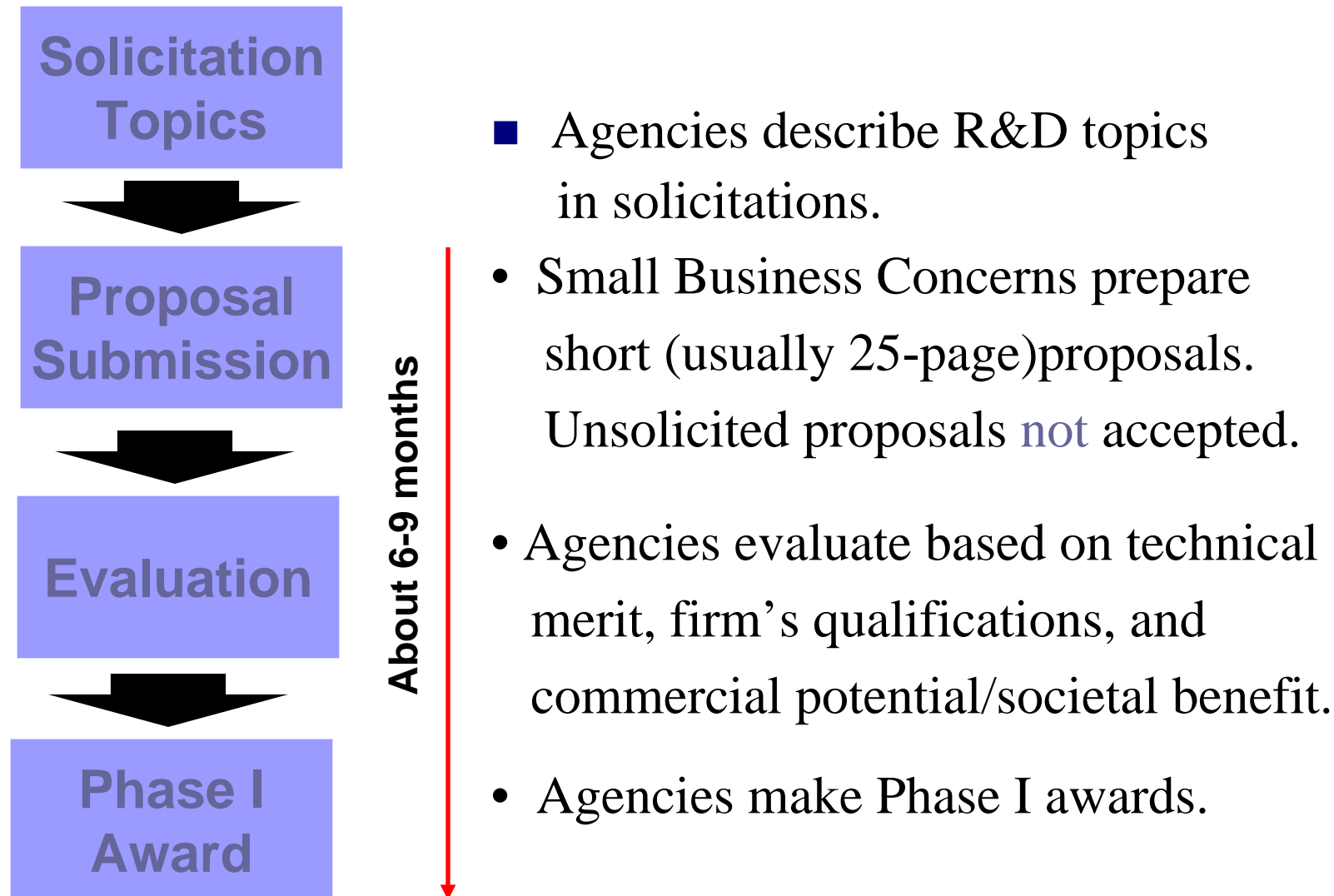


# Who Participates in SBIR?

- ✓ Firms are typically small and new to the program.
- ✓ About 1/3 are first-time Phase I awardees.
- ✓ Small hi-tech firms from across the country.



# Standard Phase I Process







# Evaluation Criteria

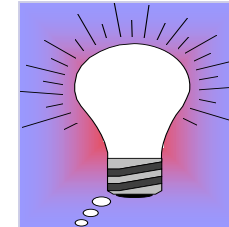
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- Scientific and Technical Merit
- Qualifications of PI/other key personnel
- Soundness of Work Plan
- Commercial Potential

# SBIR/STTR: 3-Phase Program

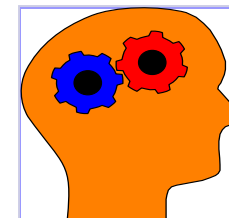
## PHASE I

- ➔ Feasibility Study
- ➔ \$100K and 6-12 month award (SBIR/STTR)



## PHASE II

- ➔ Full Research/R&D
- ➔ \$750K and 2-year Award (SBIR/STTR)



## PHASE III

- ➔ Commercialization Stage
- ➔ Use of non-SBIR/STTR Funds





# **SBIR/STTR Program**

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- Targets the entrepreneurial sector
- Attempts to level the playing field for small businesses
- Funds the critical start-up stage
- Encourages commercialization of technology



# What Does SBIR/STTR Fund?

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- Exploitation of scientific breakthroughs
- Innovation through the use of emerging technologies
- Novel application of existing technologies
- New capabilities or major improvements to existing technologies



# **SBIR Program**

## Eligibility Checkpoints

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- ✓ Organized for- profit U.S. business
- ✓ 500 employees or fewer, including affiliates
- ✓ PI's primary employment must be with the small business concern at the time of award and for the duration of the project period



# **SBIR Program**

## Eligibility Checkpoints

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- ✓ Small business concern must be at least 51% U.S.-owned by individuals and independently operated or --
- ✓ At least 51% owned and controlled by another (one) for-profit business concern that is at least 51% owned and controlled by one or more individuals



# STTR Program

## Eligibility Checkpoints

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- ✓ Applicant is small business concern – subsidiaries are NOT eligible for STTR program
- ✓ Formal Cooperative R&D Effort
  - ➡ Minimum 40% by small business
  - ➡ Minimum 30% by U.S. research institution
- ✓ U.S. Research Institution
  - ➡ College or university; other non-profit research organization; Federal R&D center
- ✓ Intellectual Property Agreement
  - ➡ Allocation of Rights in IP and Rights to carry out follow-on R&D and commercialization



# Partnership Guidelines and Limits Summary

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	Phase I	Phase II
<b>SBIR</b>		
Small Business Subcontractor	at least 2/3 up to 1/3	at least 50% up to 50%
<b>STTR</b>		
Small Business Subcontractor	-----at least 40%----- -----at least 30%, up to 60%-----	





# Know Your Audience

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- Know the agency's mission
- Know the agency's goal
- Find out what has been previously funded
- View the agency as a customer, not just a source of funding



# **SBIR as Part of a Business Strategy**

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- Plan for growth and financing needs
- Develop a roadmap for your company
- SBIR/STTR provides credibility
- Not equity or a loan
- Is timeline realistic for your organization?
- Is timeline realistic for your technology and markets?
- Submitting multiple proposals
- Commercialize/Transition



# Recommended Approach

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- Attend regional and national SBIR conferences and workshops
- Research agency missions
- Review current/previous agency solicitations
- Identify potential matches between topics and company's technology
- Contact agency technical personnel or topic authors if possible
- Read the solicitation. Read the solicitation. Read the solicitation.
- Determine if SBIR participation fits business plan
- Write proposal and submit.



# Winning Strategies

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- Be exactly responsive; follow instructions explicitly
- Place significant emphasis on commercialization
- Listen to the agency and respond to their needs and interests
- Stay in contact with the agency all during the proposal process, and during the Phase I and Phase II project work
- Work with mentors experienced in the SBIR program



# Where to Look For Information

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- Excellent portals:
  - [www.sbirworld.com](http://www.sbirworld.com)
  - [www.zyn.com](http://www.zyn.com)
- Individual Agency Websites
- Conferences/Workshops
- SBIR Newsletters

# Searching Agency Topic Areas

**www.sbirworld.com**

**Search: Nano**

**AIR FORCE**

**ARMY**

**NSF**

**MDA**

**NIH**

The screenshot displays the SBIRworld.com website interface. The top navigation bar includes links for News, SBIR & STTR Programs, Conference & Events Center, SBIR & STTR Solicitations, Federal Agency Links, State Resources, Partnering, and Links. A search bar on the left contains the text 'SEARCH >>'. The main content area shows 'OPEN SBIR/STTR SOLICITATION TOPICS SEARCH RESULTS' for the query 'nano', with 12 documents found. The results list includes:

- 1. [\(STTR\) DoD/AIR FORCE FY04 - 3 Dimensional Nano-Scale Reinforcement Architecture for Advanced Composite Structures](#)  
**Rank: 124 Abstract:** 3 Dimensional Nano-Scale Reinforcement Architecture for Advanced Composite Structures STTR FY04 Topic AF04-T020 Department of Defense (DoD) Air Force March 1, 2004; DoD begins accepting proposals April 15, 2004; Deadline for receipt of proposals at the DoD Components by 6:00 a.m. EST.
- 2. [\(STTR\) DoD/ARMY FY04 - Morphology and Composition of Nanomaterials Based on Laser Microplasma Spectroscopy](#)  
**Rank: 33 Abstract:** Morphology and Composition of Nanomaterials Based on Laser Microplasma Spectroscopy STTR FY04 Topic A04-T011 Department of Defense (DoD) Army March 1, 2004; DoD begins accepting proposals April 15, 2004; Deadline for receipt of proposals at the DoD Components by 6:00 a.m. EST. The entire solicitation may be viewed at.
- 3. [\(SBIR/STTR\) NSF/ST 04 - Detection](#)  
**Rank: 16 Abstract:** Detection 2004 SBIR/STTR Topic B National Science Foundation (NSF). Security Technologies (ST). May 9, 2004; NSF begins accepting proposals June 9, 2004, 5:00 p.m.; Deadline for receipt of proposals The entire solicitation may be viewed at <http://www.eng.nsf.gov/sbir/>. B. Detection Tools and systems that may be used to
- 4. [\(STTR\) DoD/MDA FY04 - Rapid Mirror Fabrication with Nanolaminate Surface](#)  
**Rank: 16 Abstract:** Rapid Mirror Fabrication with Nanolaminate Surface STTR FY04 Topic MDA04-T005 Department of Defense (DoD) Missile Defense Agency (MDA) March 1, 2004; DoD begins accepting proposals April 15, 2004; Deadline for receipt of proposals at the DoD Components by 6:00 a.m. EST. The entire solicitation may be viewed at.
- 5. [\(SBIR/STTR\) PHS 2004-2-DHHS/NIH-NIDCR/Epithelia Cell Regulation and Transformation](#)  
**Rank: 16 Abstract:** Epithelia Cell Regulation and Transformation U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES PHS 2004-2 NATIONAL INSTITUTES OF HEALTH (NIH) SBIR and STTR GRANT TOPIC(s) NATIONAL INSTITUTE OF DENTAL AND CRANIOFACIAL RESEARCH (NIDCR) SBIR/STTR Grant Topic(s) Epithelia Cell Regulation and Transformation

The website footer shows the Windows taskbar with the start button and various open applications, including Internet Explorer, IMP..., Sen..., Wel..., RE..., Gen..., NIH..., and SBI... The system clock indicates 9:29 AM.



# **SBIR Alerting Service**

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- **Automatic notification of changes and updates for SBIR/STTR Programs (solicitations, training, conferences)**
- **Alerts include contact information and web addresses**
- **Often include a tip of the month**
- **E-Mail or fax alerting, over 3,000 subscribers**
- **Frequency: approximately every other week**
- **Back issues and tips available on the web**
- **Cost: free**
- **Subscribe at [www.pnl.gov/edo/sbir](http://www.pnl.gov/edo/sbir)**



# **SBIR/STTR Benefits**

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- Over \$2 Billion available
- NOT a loan – no repayment
- Provides seed money to fund high risk projects
- No equity dilution
- Provides valuable recognition, credibility and visibility
- Offers simplified route to obtaining federal research funds





# **SBIR/STTR Benefits**

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- Fosters partnerships with national laboratories, universities or other non-profit research institutions
- Intellectual property rights are retained by the small business
- Potential leveraging tool to attract venture capital, or other sources of funding
- Creates jobs and stimulates the local and state economies



# Department of Energy Program Features

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- GRANTS
- Annual Solicitation (Fall)
- \$100K Phase I (9 months)
- \$750K Phase II (24 months)
- Electronic applications only (Grants.gov)
- Must be awarded Phase I from DOE to compete in Phase II
- SBIR: PI must be employed by small business
- STTR: PI may be employed by either small business or research partner



# Department of Energy Solicitation Schedule

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	<u>SBIR</u>	<u>STTR</u>
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## **FY 2007 Solicitation**

Release Date

September 2006

Closing Date

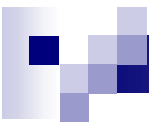
December 2006

Phase I Award Selection

mid April 2007

Phase I Grant Begin

late June 2007



# **Department of Energy**

## **SBIR/STTR Budget/Awards**

### **FY 2006**

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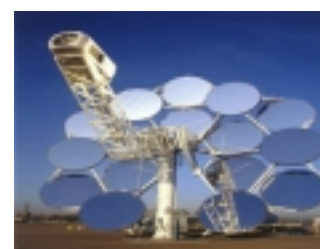
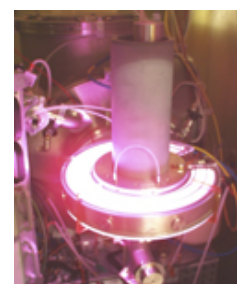
	<b><u>SBIR</u></b>	<b><u>STTR</u></b>
<b>FY 2006 Budget</b>	\$105M	\$12.6M
	(2.5%)	(0.30%)

### **Award Selections**

Phase I	262 (\$ 100K)	29 (\$ 100K)
Phase II	~135 (\$ 750K)	~11 (\$ 750K)

# FY 2006 SBIR/STTR TECHNICAL TOPIC CATEGORIES

<b>Energy Production</b>	8
Fossil and Nuclear Energy	
<b>Energy Production – Future</b>	7
Fusion and Renewable Energy	
<b>Energy Efficiency</b>	8
Transportation, Buildings, Industry	
<b>Environment</b>	5
<b>Life Sciences</b>	2
<b>Materials</b>	4
<b>Data Management and     Communication</b>	5
<b>High Energy and Nuclear Physics</b>	8
<b>National Security</b>	<u>2</u>
<b>Total Topics</b>	49




SMALL BUSINESS INNOVATION RESEARCH - Microsoft Internet Explorer provided by The Office of Science

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*Science, Technology and Energy for our Future*

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**SMALL BUSINESS INNOVATION RESEARCH**

**SMALL BUSINESS TECHNOLOGY TRANSFER**

*Supporting scientific excellence and technological innovation through the investment of federal research funds in critical American priorities to build a strong national economy.....one small business at a time.*

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Headlines:

- 1/18/06 - **DOE issues FY 2006 SBIR/STTR Phase II Funding Notice -- applications due 4/17/06.** Go to [www.grants.gov](http://www.grants.gov) to access notice. Search for notice by agency. Notice number is DE-FG02-06ER06-09. Print and read funding notice instructions before trying to submit. You must submit through grants.gov, NOT IIPS.
- 12/27/05 -- **Phase I:** DOE has received and entered 1384 Phase I grant applications received by the deadline of December 2, 2005. Acknowledgements have been sent to all applicants via email to the business official on application. Please notify our office immediately by email ([sbir-sttr@science.doe.gov](mailto:sbir-sttr@science.doe.gov)) if you have not received a confirmation of receipt of your applications. Phase I funding decisions will be made the end of April 2006. All applicants will be notified by email of the outcome.
- 12/27/05 -- **Phase II:** DOE Phase I awardees from FY 05 are invited to submit Phase II grant applications by the deadline of April 17, 2006. Applicants will be required to use [www.Grants.gov](http://www.Grants.gov) for submission. The Phase II Funding Notice will be posted on Grants.gov in early to mid-January 2006. An Email alert will be sent from the SBIR/STTR office to all eligible applicants when the instructions are available.

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Phase I/II Opportunities - Microsoft Internet Explorer provided by The Office of Science

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**United States Department of Energy**  
*Science, Technology and Energy for our Future*

*Phase I and II Funding Opportunities....*

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- Open Notices  
[FY06 SBIR/STTR Phase II Funding Notice](#) -- opened January 18, 2006 (deadline for applications 4/17/06)
- Closed Notices  
[FY 06 Phase I Funding Notice](#) -- closed 12/2/05  
[FY 05 Phase I Solicitation](#) -- closed 12/13/04  
[FY 05 Phase II Solicitation](#) -- closed 4/13/05
- Upcoming Notices  
Phase I  
FY 07 Phase I Funding Notice -- opening in the Fall 2006

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# DOE SBIR & STTR PROGRAM CONTACT INFORMATION

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**Web page:** [www.science.doe.gov/sbir](http://www.science.doe.gov/sbir)

**Email:** [sbir-sttr@science.doe.gov](mailto:sbir-sttr@science.doe.gov)

**Phone:** 301-903-1414

**Fax:** 301-903-5488

